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Worldwide Report

TELECOMMUNICATIONS POLICY,
RESEARCH AND DEVELOPMENT

No. 237

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7 September 1982

WORLDWIDE REPORT

TELECOMMUNICATIONS POLICY, RESEARCH AND DEVELOPMENT

No. 237

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INTER-ASIAN AFFAIRS

BRIEFS

'PTI'-APP EXCHANGE--Islamabad, August 4 (PTI)--Pakistan's federal cabinet has approved a news exchange agreement between THE PRESS TRUST OF INDIA and THE ASSOCIATED PRESS OF PAKISTAN (APP). The cabinet which met in Rawalpindi yesterday with President Zia-ul-Haq in the chair, also approved similar agreements between APP and Saudi press agency. The PTI-APP agreement provides for mutual use of international and domestic news put out by the two agencies as also exchange of news, photographs and features. [Text] [Bombay TIMES OF INDIA in English 5 Aug 82 p 7] 9459

CSO: 5500/7206

WA BENEFITS FROM REPOSITIONING OF U.S. SATELLITE

Perth THE WEST AUSTRALIAN in English 16 Jul 82 p 19

[Text]

A DECISION by the U.S. National Aeronautics and Space Administration to move a dying satellite closer to Australia has brought an unexpected bonus to WA.

Potential users of the new Australian domestic satellite, due to be launched in 1985, will have 12 months free use of the ATS-1 satellite before it is taken out of orbit.

The police, emergency services, health and educational authorities will be able to gain practical experience in satellite communications.

The ATS-1, launched in 1966 to aid communications between the Pacific nations, is NASA's oldest communications satellite.

It revolutionised university education in the South Pacific by bringing extension courses direct to students in scattered island nations.

It has also been used for health education, oceanographic research, meteorology and general communications for the entire Pacific region.

In Alaska, it formed the basis of an emergency medical communications scheme similar to Australia's Roy-

al Flying Doctor Service.

But last year, one of the two attitude control jets on the satellite failed and NASA was forced to make an urgent decision about its future.

It decided to move it from its orbit over the central Pacific to a new position just to the north-east of Australia.

There it will be subject to a weaker gravitational pull and will need less fuel to keep it in orbit.

The delicate manoeuvre was begun in January and the satellite is expected to reach its new orbit by October.

It will then have 12 months of life.

The change in position brings WA within reach of the ATS-1 for the first time—hence the benefit to WA organisations planning to use Australia's domestic communications satellite (Aussat) when it is launched in 1985.

The University of WA extension service intends booking time on the satellite so that interested authorities and community organisations can experiment with satellite communications.

PROFESSOR DESIGNS INDIGENOUS MICROCOMPUTER

Dacca THE NATION in English 1 Aug 82 p 3

[Text]

Dr. Syed Mahbubur Rahman, Assistant Professor of the Faculty of electrical and Electronic Engineering of Bangladesh University of Engineering and Technology (BUET) has designed a new micro-computer recently.

According to Dr. S. M. Rahman, the micro-computer can be used extensively in Bangladesh and other Third World countries to increase industrial efficiency and productivity. Micro-computer, serving the desired purpose, can successfully computerise the industrial production, traffic control, telephone exchange, hospitals, banks, power supply, etc., he said.

Dr Mahbubur Rahman while demonstrating his micro-computer told this correspondent, "Our engineers are equally talented, compared to those of the developed

countries and can even computerise any organisation thus reducing the dependence on foreign exchange and foreign experts." He said, Micro-computer or mini-computer can now be designed and developed in Bangladesh by our own experts." He said that five to seven times of the cost in foreign exchange could be saved if we computerise any organisation by our own experts. A computer will help in industry in boosting productions, increasing managerial efficiency, process and quality control.

It is learnt that a micro-computer if imported will cost Taka 2.5 lakh in foreign exchange, but if made locally, it will cost only Taka 30,000 in foreign exchange for material cost addition to Taka 20,000 for craftsmanship.

He urged the Government and industrialists to come forward in computerising the industries and other organisations with our own experts so that our products could compete in the international market.

While he was in Hungary, Dr. Mahbubur Rahman designed a universal micro-computer system for industrial automation which was now being used in a glass factory there.

Dr. M. Rahman and Khan, Md. Golam Kibria, a Lecturer of BUET, are now jointly doing research work on, designing of Bengali display and Bengali keyboard by which a computer can be communicated. The research work is expected to be completed very soon.

OPERATIONAL POSSIBILITIES OF INSAT-1A TOLD

Madras THE HINDU in English 4 Aug 82 p 8

[Article by N.N. Sachitanand]

[Text]

THE post-flight review of the INSAT's performance has just been completed according to knowledgeable sources, and it has been decided not to make any efforts to shake loose the solar sail. This is because it was noticed that earlier attempts have only released the lanyard which is restraining it, but the boom remains in the closed position. Any further attempts at deploying the boom may jeopardise the whole mission.

Scientists at ISRO have been able to make an analysis for the non-deployment of the boom and attribute it to the presence of higher restraining forces than predicted. Incidentally, such lanyard and extendable boom mechanisms have been used in quite a number of American satellites such as the RCA's Discoverer — Explorer series and the famous Voyager satellites of the Jet Propulsion Laboratory.

Firm conclusion

A firm conclusion that has been drawn by the post-flight review is that the basic design of the INSAT satellite is all right, but some modifications will have to be made in the deployment and other mechanisms to ensure trouble — free operation of the INSAT 1B which is scheduled for launch in July 1983.

In the context of the thermal problems in the satellite created due to the non-deployment of the solar sail, the following operational scenario will be possible:

(1) The 12 C-Band transponders on board used for telecommunications, will be operable all the time, except during the twice-a-year eclipse, when only four will be operational due to limits of battery size. Thus, the telecommunication function of the satellite remains unaffected.

Sufficient

(2) As far as the very high resolution radiometer is concerned, originally it was designed to take pictures of the earth once every 1/2 hour, but now, due to the thermal problems and the need to dissipate the thermal energy build-up, the interval between pictures will be one hour. This however, will still be sufficient for the requirements of the Indian Meteorological Department (IMD).

(3) The data relay transponder, used to relay data beamed from the automatic meteorological data collection platforms which will be positioned all over the country, can be operated all the time.

(4) The most severely hit is the S Band transponder, used for radio and TV network-

ing. This is located behind the north panel of the satellite on which the undeployed solar sail is sitting. Since the heat radiation is thus blocked, the S Band transponder can be operated continuously only for 2-1/2 hours in the mornings and 2-1/2 hours in the evenings.

As far as utilisation for TV broadcasting is concerned, this limited availability of the S Band transponder should not affect it much. The original scheme called for about 1-1/2 hours availability in the mornings to broadcast educational programmes to the direct receiving sets in some rural areas of Andhra Pradesh and Orissa and three to 3-1/2 hours of general programmes in the evening. It may be possible to extend the use of the S Band transponder to three hours continuously by reducing the heat generated in the spacecraft by switching off for that period two of the C Band transponders used for telecommunication. These are anyhow on standby.

Misapprehension

Radio networking will, however, be badly curtailed by the limited availability of the S Band transponders. The demand from AIR was for continuous networking availability from morning till night.

On reading reports about the status of the ground segment of the INSAT system, it would appear that here things are way behind schedule. This is a misapprehension. In the telecommunications area, the original programme was to have 1,400 telephone circuits lined up by July end. Due to the post-launch problems with the satellite and the greater than expected difficulties encountered in lining the circuits (thanks to the many varieties of telephone exchanges in the country) the task will now be accomplished by September end. The rest of the 2600 circuits (the satellite can handle 4000 speech circuits) will be progressively lined up by September/October 1983, as originally scheduled.

Indigenous

There has been no delay on account of setting up the earth stations. Of the 28 P and T earth stations planned, 27 are ready and Jullundur will become operational by the end of August. It is the only one having an indigenously made, high power amplifier, made for the first time in the country by ECIL. This piece of equipment has been just supplied. As for the ONGC, its two earth stations — one offshore and one onshore — will be ready in September.

Coming to the meteorological application area, 80 per cent of the value of the ground segment is involved with receiving and analysing the earth imaging data from the satellite. This is already operational at the Meteorological Data Utilisation Centre (MDUC) in Delhi on a round-the-clock basis and is being regularly used for meteorological forecasting.

Secondary Data Utilisation Centres (SDUC) will be ready by September end. These will receive the earth imaging data from the Delhi MDUC and distribute it to end users. Twenty of these SDUCs are planned for the whole system.

Requests

It is significant to note that INSAT-1A is the only satellite at present which is beaming earth imaging data from a geostationary position over the Indian Ocean. India has now received a number of requests from other countries and international agencies to feed this data to them. A plan is now being worked out to achieve this.

Another meteorological use of INSAT is to collect Meteorological data beamed to it from remote automatic Data Collection Platforms (DCP). The original plan was to deploy 100 of these by the last quarter of 1984, starting with eight to be installed by the end of September this year. The DCPs have been designed and are being made for the first time in the country.

As of now, one DCP is already operational at Hassan, two more have been accepted by the IMD and six are awaiting testing. All of them are expected to be installed and operational by September end. However, their utilisation will have to await the installation of a special receiver at the Delhi MDUC. This receiver will handle the very narrow band transmission from the satellite of the data received from all the DCPs. The receiver arrived from the USA a month ago and is being now 'tuned' for compatibility with INSAT.

Novel concept

INSAT's meteorological utilisation system also has a direct disaster warning system which can be selectively and specifically activated wherever the disaster is imminent. This is a novel concept not found elsewhere in the world and, therefore, necessitated the indigenous design and development of special disaster warning receivers. The prototype of the receiver is now ready and the process of selecting manufacturers has begun. They are supposed to be ready for demonstration only by early 1984 and ultimately 100 of them will be installed.

The use of INSAT for radio and TV networking was a very late afterthought, the proposal being made in July 1981, four years after the original utilisation scheme for INSAT had been approved. This is why the hardware development and installation for the ground segment appears to be delayed.

For radio networking the plan is to have 94 stations with a special five channel receive-only terminal installed in each station for receiving the broadcast relayed by the satellite. Designed by the Space Application Centre (Ahmedabad) and AIR, this receiver will be made by Keltron. Supplies are expected to start by mid-October this year and be completed by 1983 end.

Meanwhile, as a contingency measure, 10 stations will be put on the radio network map by August 15 this year by installing near them makeshift receivers.

As for radio uplinks which will beam the national programme to the satellite for relay, it is planned to have one uplink at Delhi by September this year. Another three stations, Bombay, Calcutta and Madras, will have the uplink facilities by the fourth quarter of 1983. Till it gets its regular uplink equipment Delhi is at present utilising a transportable terminal made by the ISRO.

Makeshift Arrangement

There are now 19 terrestrial TV transmitting stations in the country. One more will be commissioned at Nagpur by August 15. It is planned to hook up all these transmitters for a nationwide network by connecting seven or eight of them by earth-based microwave links and the remainder via INSAT through direct reception sets. This is only a makeshift arrangement. Ultimately the satellite TV networking will be achieved through earth-based S band receive-only terminals which are being made at the BEL. It is to the BEL's credit that though it received the order for this equipment only in January this year it has already come up with two prototypes which will be tried in the TV national hookup experiment on August 15.

For the educational TV programme for rural areas, INSAT is planned to be used through direct receiving sets installed in six clusters in the country. A beginning is to be made this year with broadcasts beamed at clusters in A.P. and Orissa for which the ECIL has been given an order to make and supply 800 sets. This order was given only in January this year and the delivery is expected to start from August and be completed by October end.

Accusations of the INSAT system being a financial flop are, to say the least, very premature. Saturation utilisation, especially of the telecom circuits will come only from the fourth year onwards. When the system was planned, a return of 26 percent was calculated and knowledgeable ISRO sources do not see any reason now why this will not come about.

The initial financial setback sustained due to the reduction of the life of INSAT 1A to 2-1/2 years from the designed seven years is expected to be compensated by insurance. The claims from the insurance companies, however, can be lodged formally only 180 days after launch. However, the process of survey has already been initiated. There is also a performance payment clause in the contract with Ford Aerospace which made the satellite. ISRO expects to recover a good chunk of losses from this source also.

CSO: 5500/7205

RADIO STATIONS TO BE LINKED THROUGH INSAT-1A

New Delhi PATRIOT in English 2 Aug 82 p 8

[Text]

All stations of All India Radio are being linked through the Indian National Satellite (INSAT-1A) for simultaneous relay of programmes, reports PTL.

According to an official announcement in New Delhi on Sunday, 10 of the AIR stations are expected to be connected to Delhi by the end of this month. Two stations, Ahmedabad and Hyderabad, have already been linked and are relaying news bulletins originating from Delhi via satellite.

The eight other stations to be linked by the end of August are Srinagar, Jaipur, Bhopal, Trivandrum, Gauhati, Imphal, Kohima and Cuttack.

Sixteen more stations will be linked through the satellite by the end of March, next year. These are Ratnagiri, Bangalore, Patna, Lucknow, Panaji, Tiruchirappalli, Siliguri, Gorakhpur, Nagpur, Visakhapatnam, Agartala, Jullundur, Raipur, Coimbatore, Jaipur and Simla.

The networking of all the 85 AIR stations will be completed in a phased manner by the end of next year.

INSAT-1A has two S-band transponders which function as carrier for radio signals. The sig-

nals are sent to the satellite in the 'upward link' provided by the P and T earth stations and are received in the 'downward link' through the special radio receiver terminals being set up at AIR stations.

Thereafter, they can be broadcast simultaneously via the transmitter attached to the station or recorded and broadcast later at a convenient time.

The uplink facilities will be provided at the four metropolitan centres of Delhi, Madras, Bombay and Calcutta. While Delhi will have four uplink channels, the other three centres will have one channel each. All other stations will have only down link facility for receiving programmes beamed through the satellite.

An uplink facility at Delhi has already been established through the Transportable Remote Area Communication Terminal (TRACT), a mobile earth station, installed by the Space Application Centre in the broadcasting house compound.

This mobile station will be used for transmission of AIR programmes through the satellite till the uplink channel at the P and T earth station at Delhi is completed.

CSO: 5500/7207

DETAILS OF ACCORDS WITH FRANCE ON PHONE EXCHANGE PROJECT

Madras THE HINDU in English 3 Aug 82 p 7

[Text]

NEW DELHI, Aug. 2

Comprehensive agreements have been reached between the Governments of India and France for setting up a factory to build an electronic telephone exchange. It will have an annual capacity of five-lakh lines.

The location of the factory to be set up in collaboration with the nationalised French company, CIT-Alcatel, is yet to be decided. The Government is having second thoughts on its location in Gonda, Uttar Pradesh. It is likely that the Government may revert to the earlier decision to have it on Hosur Road, near Bangalore.

The project, which will build the digital E-10 electronic switching system, is estimated to cost Rs. 149.19 crores with a foreign exchange component of Rs. 74.22 crores. The total credit which the French Government had agreed to provide under a financial protocol signed in Paris in May last is for 1,080 million francs (about Rs. 150 crores).

Among the features of the French offer is that the credit, apart from fully meeting the estimated foreign exchange cost, also provides for certain other services and equipment to ensure adequate technology transfer. The total cost of the package offered by France, is 870 million francs and its break-up is:

(i) licence for the manufacture and setting up of factory — 41 million francs; (ii) supply of two-lakh lines of finished equipment — 373 million francs; (iii) R and D collaboration — 18 million francs and (iv) equipment and services from Sofrecom, a subsidiary of the French Telecommunications Administration — 69 million francs. Half of the French credit is in soft loans and the balance will be buyers' credit at the lower rate of interest prevailing before May 15.

Full production in four years: Under the agreements signed, the factory will start production initially based on assembly of imported sub-systems and will reach full production (including in-house manufacture of components like PCB boards, connectors, etc.) in four years.

Apart from the agreement with CIT-Alcatel, another agreement has been signed between the Government of India and Sofrecom for the operation and maintenance of digital exchanges, management methods for digital electronic system, network planning, software and reliability centres.

Mr. C. M. Stephen, Union Communications Minister and Mr. Louis Mexandeau, visiting French Minister for Postal Services and Telecommunications, today signed two memoranda of understanding. The details of the agreements are:

(1) Between Indian Telephone Industries Limited and CIT-Alcatel: (A) agreement for licence and transfer of know-how for the E-10 digital electronic switching system and (B) agreement for setting up an electronic switching system factory with a production of five-lakh lines per annum.

(2) Between the Government of India and CIT-Alcatel: (A) for collaboration in research and development for development of the next generation system and (B) for supply of two-lakh lines of finished equipment.

(3) Between the Government and Sofrecom: (A) for supply of equipment necessary for acceptance testing reliability centre, operation and maintenance, etc., and (B) training and technical assistance.

(4) Another agreement was signed to cover the R and D collaboration between the Telecommunication Research Centre of the P and T Department and its counterpart organisation, CNET (French National Centre for Research and Telecommunication) of the French Telecommunication Administration.

The first three agreements were signed on July 24 by Mr. S. K. Ghose, Secretary, Union Ministry of Communications, Mr. C. S. S. Rao, Chairman, ITI and Mr. T. S. Subramaniam, Officer on Special Duty, P and T Directorate, on behalf of India and by Mr. Christian Fayard of CIT-Alcatel and Mr. Francois Baret of Sofrecom on behalf of France. The fourth agreement was signed today by Mr. K. Swaminathan, Director, TRC and Mr. Poitevin on behalf of CNET.

Umbrella-type support: The other memorandum signed with the French Government provides for an umbrella-type of support covering all the above agreements and for the future flow of technology in the field of telecommunication.

The French offer was received last December and was subsequently examined in detail. An inter-departmental committee evaluated the offer and found that the digital electronic exchange system was acceptable from technological consideration, since the technology transfer meets India's requirements.

The Union Cabinet approved the proposal of the Ministry of Communications for issue of a letter of intent before May 15, in order to secure the advantage of lower rate of interest. The letters of intent were accordingly issued on May 14 to CIT-Alcatel and Sofrecom.

The French offer for one factory has been accepted without making any comparison with the offers received against global tenders

floated earlier for two factories. The prices in the French offer have been compared only with the earlier tenders received for the setting of the Palghat electronic exchange factory and for the import of finished equipment of 30,000 lines in an earlier global tender floated by the P and T. The French Government has also offered to extend collaboration for the Palghat project. A final decision is yet to be taken.

The acceptance of the French offer for one factory has caused disappointment among the international companies which had responded to global tenders. CIT-Alcatel had also submitted its offer in response to the global tender and the other companies were: CSF Thompson of France, Phillips of Holland, BTM of Belgium, Fujitsu of Japan, Hitachi of Japan, GTE/Italcatel of Italy, GEC of Italy, Siemens of West Germany and NEC of Japan. Evaluation of these tenders for the other factory is in two stages. The technical documentation will be first examined and after equalising them with the other offers, a choice will be given to the firms to modify their financial offers.

CSO: 5500/7204

TELEVISION RELAY CENTER PLANNED FOR COCHIN

Madras THE HINDU in English 28 Jul 82 p 6

[Text] New Delhi, July 27--Cochin (Emakulam) is to get a TV relay centre. This will be set up with the help of P and T microwave links in a phased programme, the Lok Sabha was informed today.

Its implementation would depend on the availability of resources and relative priorities, Mr Vasant Sathe, Information and Broadcasting Minister told Mr Xavier Arakal in a written reply.

In reply to another question, he said a TV station at Vijayawada was expected to be commissioned in 1984-85.

Commercial TV channel: Mr Sathe said an independent commercial TV channel was proposed to be introduced with a duration of eight hours. There would also be a separate channel for rural programmes.

The commercial channel was being considered since broadcasting got low priority in the allocation of funds. "So we have to think of means of earning more money."

Dr Subramaniam Swamy asked whether Government television would become irrelevant since many people in localities like Cuffe Parade and Colaba in Bombay were going in for closed circuit TV and cable TV. He also wanted to know whether it was legal to have these facilities.

The Minister said closed circuit TV was something which anyone could opt for. There was nothing illegal about it. But cable TV was a different proposition. However, he said cable TV would not be possible on a large scale at present.

Replying to some remarks by CPI(M) member Mr Satyasadhan Chakraborty regarding rural channel, Mr Sathe said even China was making about 50 lakh television sets this year in view of the importance of TV programmes. The Minister asked why the rural people should be denied this advantage. "Is it a prerogative of only urban areas?" he asked. A task force was constituted to prepare a scheme for introduction of sponsored programmes on Doordarshan and

to give its recommendations both for a short-term plan taking into account the facilities available at Doordarshan Kendra, Bombay and for long-term plan covering the need for establishing independent studio facilities and a separate channel for commercial television.

No plan to stop supply of newsprint: The Government was not considering any proposal for withdrawal of newsprint allocation to the newspapers which did not print their circulation figures, Mr Sathe said. About 32 newspapers in English and in regional languages were publishing information about the number of copies printed of the preceding issue.

CSO: 5500/7201

BRIEFS

NEW TELEVISION RECEIVER--New Delhi, July 29--Bharat Electronics Limited (BEL) has developed a receive-only terminal for use by Doordarshan for relaying TV programmes via INSAT. The S-band receiver meets international specifications and can be used for receiving both black and white and colour TV signals. The S-band signals from INSAT are picked up by the receive-only terminal, amplified and processed to produce standard video and audio output signals. These signals are fed to the TV transmitters for rediffusion. The programmes are thus made available for reception on conventional low-cost domestic receivers. The terminal built at a cost of Rs. 3.3 lakhs has undergone successful tests at the microwave antenna test range located in the hill ranges near Sohna in Haryana. Two terminals designed in a record time of eight months will now be transported to Nagpur and Hyderabad and are expected to become operational by August 15. The terminal, consisting of a six-metre dish antenna, has to be pointed accurately towards the satellite. The public undertaking is expected to supply 50 more such terminals by July next year. [Text] [Bombay THE TIMES OF INDIA in English 30 Jul 82 p 3]

TELEVISION FOR MORE AREAS--The Ministry of Information and Broadcasting is in the process of formulating a new scheme aimed at generating additional funds for taking television to areas not covered in the sixth Plan reports UNI. The Ministry is engaged in the task of modifying the proposal of having programme production centres at places other than the State capitals according to informed sources. The sources said the Ministry was thinking in terms of having a full-fledged production centre at one place, preferably in a State capital. This would help in proper coordination between various agencies and in meeting the programme requirements of the State. The sources said setting up programme production centres at some other places in addition to the one in a State capital was both time consuming and an expensive affair. Instead, a network of television transmitters of varying capacities could be installed at different places in a State which would "provide larger coverage to areas not covered in the present five-year-Plan." The Ministry is also reviewing the existing schemes, specially in the context of introduction of colour television in a phased manner with the objective of providing studio facilities in State capitals where there were none at present. The proposed common national programme on Doordashan scheduled to begin on Independence Day will also include centres specially selected for beaming educational and instructional programmes through INSAT. Besides Bombay, Madras, Bangalore, Jullundur, Calcutta and Lucknow, there were possibilities of extending the national network programmes to Hyderabad, Cuttack, Raipur, Muzaffarpur, Jaipur, Gulbarga and Nagpur. [Text] [New Delhi PATRIOT in English 13 Jul 82 p 5]

TELEX TO PAKISTAN--Bombay, July 27--The director-general of the overseas communications service has notified in a press note issued here yesterday that direct international telex service with subscriber dailing facility has been made available to Ivory Coast and Pakistan with immediate effect. [Text] [Bombay THE TIMES OF INDIA in English 28 Jul 82 p 7] 9459

COCHIN EARTH STATION--Cochin, August 3--The Rs. 1-crore primary earth station at Meenkunnam, near Moovattupuzha, about 50 km from here is almost ready and is expected to be commissioned next month, according to the telegraph authorities. The Pand T. department has cleared the installation after conducting tests. Experiments through INSAT will be conducted as soon as the required equipment reaches the station. Commissioning of the earth station, according to the P and T authorities, will facilitate better telecommunications between Cochin and places like Bombay, Calcutta and Delhi. The remote earth station at Minicoy is also ready and telephone circuit from Kerala to Minicoy and Lakshadweep islands has started functioning through INSAT on an experimental basis. The telegraph authorities said no final decision had yet been taken on bringing the ASIAD coverage live through TV to Trivandrum and Cochin by putting up min-transmitters. [Text] [Bombay THE TIMES OF INDIA in English 4 Aug 82 p 7]

SWITCHING EQUIPMENT FROM FRANCE--Madras, July 28--The Centre has signed a contract with a French firm for the supply of electronic switching equipment with a total capacity of five lakh lines. Another agreement for the manufacture of a new telephone instrument will be signed in the next two months. Speaking at a function held here today to mark the inauguration of the Store and Forward Telegraph System at the Central Telegraph Office, Mr C.M. Stephen, Communications Minister said modern technology was being inducted to ensure a trouble-free telephone and telegraph service to the people. Nearly 40 percent of the faults occurring in telephone operation could be attributed to faulty instruments. Referring to the SFT system, he said it was being introduced for the first time in the country. It was developed by Electronics Corporation of India, Hyderabad, in close collaboration with the Tamil Nadu Telecom Circle. A second SFT system had been installed at Secunderabad and Mr Stephen utilised it to send a telegram to Hyderabad. He also received an acknowledgement. Speeds up telegrams: The SFT system, based on modern microprocessor technology is capable of speeding up telegrams to an extent hitherto considered impossible. Telegraph offices are connected to the system which "stores" the message in its memory and "forwards" it immediately a line becomes available. The system, according to Mr U.D.N. Rao, General Manager, Tamil Nadu Telecom Circle, who welcomed the Minister, is very reliable. Mr S.R. Vijayakar, Managing Director, ECIL, Hyderabad, said that in the field of electronics technology was changing very fast and unless the Government took quick decisions, induction of the latest technology would not be practicable. Mr Sashidaran proposed a vote of thanks. [Text] [Madras THE HINDU in English 29 Jul 82 p 9]

CSO: 5500/7202

NANJING STATION TESTS SATELLITE TV TRANSMITTING

OW200700 Nanjing JIANGSU Provincial Service in Mandarin 2300 GMT 18 Aug 82

[Text] The Nanjing satellite communications ground stations, designed and built by our country, yesterday conducted a test of transmitting television programs to half of the world through an international communications satellite. Leading comrades of the Ministry of Electronics Industry, Jiangsu Province and Nanjing Municipality as well as comrades engaged in the research and development of satellite communications visited this ground satellite station fitted out with domestically produced equipment and watched television programs transmitted and received through the international communications satellite.

They said: The result of the test is good. The pictures received were soft, sharp and clear.

The equipment of the Nanjing satellite communications ground station was developed and manufactured by the Nanjing Institute of Electronic Technology, the Nanjing Hardware Research Institute, the (Xinlian) Machinery Plant, the Changjiang Machinery Plant, the Nanjing Electron Tubes Plant, the Nanjing Telecommunications Equipment Plant, the Nanjing Radio Factory, the Jinling Radio Equipment Plant, the Nanjing College of Engineering and the Nanjing Posts and Telecommunications Institute.

Since the completion of its construction in 1978, the Nanjing satellite communications ground station has conducted three phases of tests: the first phase was an experimental verification test, the second was an open-circuit test, and the third was an operational test. Since June this year this station has transmitted television programs on a trial basis through the international communications satellite.

The successful test carried out by the station shows that our country's electronics industry has a technical force capable of developing and producing satellite communications equipment mainly with domestically produced materials and devices.

CSO: 5500/4022

BRIEFS

SUCCESSFUL INTELSAT TRANSMISSION TESTS--Beijing, 22 Aug (XINHUA)--Two Chinese-built satellite ground stations, in the Jiangsu provincial capital of Nanjing and the Hebei provincial capital of Shijiazhuang, Wednesday passed transmission and reception testing, according to the Ministry of the Electronics Industry. The tests were conducted through an Intelsat satellite over the Indian Ocean the afternoon of August 18, the ministry said. Pictures were clear and bright and the sound crisp. The stations are equipped entirely with domestically-made installations. [Text] [OW221312 Beijing XINHUA in English 1251 GMT 22 Aug 82]

CSO: 5500/4023

NEW PHONE EQUIPMENT FROM GDR TO BE IN BY SEPTEMBER

St Georges FREE WEST INDIAN in English 3 Jul 82 p 3

[Text] ARRANGEMENTS have been finalised with the German Democratic Republic (GDR) for first delivery of telephone equipment for the new exchanges in St. George's and Mr. Hartman, where construction work has already begun.

This was disclosed by Grenada Telephone Company (GTC) manager Ivor O'Brien, Thursday. He said the first delivery should be by the end of September, at which time the two buildings to house the equipment would be ready. Installation of the new system should therefore begin simultaneously, said Bro. O'Brien.

The new equipment will include junction cable, which will give improved transmission, electricity generators for anticipated black-outs and exchange and radio equipment. This will cost the working people some \$2.9 million.

As a result of the expected new equipment, the 1,600 lines in St. George's will be increased to 2,600 which will mean that many of the people waiting for telephones will be able to get one, between St. Patrick's and some for the first time. O'Brien is optimistic that the additional lines will be quickly absorbed.

The exchange in Mt. Hartman will replace the present one at Morne Rouge, which serves south St. George's. It will be increased by 640 lines bringing to 1,000 the number of lines in the area. Bro. O'Brien said he is hoping that the increase will be able to cope with the initial impact of the opening of the international airport at Pt. Salines, around where hotels, industries, and business are expected to develop.

At present, the exchange in St. Andrew's has 400 lines and the number will be increased to 800 after a new building to house the equipment is built. The lines will come from the existing exchange in St. George's but that will be after the new exchange is installed in St. George's, by about April 1984, according to O'Brien. He said the lines are good and reliable but it must be noted, however, that the exchange in St. Andrew's will not be new.

Some 500 lines will be sent to Westerhall from the St. George's exchange, bringing the number there to 800. The existing lines in St. Andrew's will be divided St. John's. Those in St. David's will be kept as spares, for that parish will get a new exchange with a capacity of up to 400 lines.

Carriacou and Petit Martinique will get new exchanges with 240 and 40 lines respectively and they will be linked to Grenada by radio. It means that they will be able to call Grenada directly for the first time. The present telephone system, which is automatic, was installed in 1957 after the previous semi-automatic system was blown by Hurricane Janet in 1955.

The GTC will extend its service in some areas, O'Brien disclosed. Areas most likely to benefit are Birch Grove, New Hampshire and Willis.

O'Brien is appealing to hunters to cease shooting maniocou on the telephone cables which are usually damaged in the process. Kite thread also damages cables, he said, and cable is expensive, even more expensive than the exchange equipment.

CSO: 5500/7558

IRAN

BRIEFS

SARCHESHMEH GETS TELEPHONE NETWORK--KERMEN (IRNA)--On the occasion of Eid-ul Fitr, the automatic urban and trans-urban telephone network of the Sarcheshmeh Copper Mill, in the Kerman Province, was put into operation and linked up with the nationwide telephone network, reported an IRNA correspondent in Kerman, the capital of the Province. According to the report, this project was named "Martyr Dr. Ghandi", in commemoration of the late minister of Post, Telegraph and Telephone of the Islamic Republic of Iran. [Tehran KAYHAN INTERNATIONAL in English 27 Jul 82 p 4]

CSO: 5500/5349

KUWAIT

DANISH FIRMS WIN CONTRACT FOR OPTICAL FIBER PHONE SYSTEM

Copenhagen BERLINGSKE TIDENDE in Danish 13 Aug 82 Sec III p 2

[Article by Erik Bendt Rasmussen]

[Text] Nordic Cable and Wire Factories and Jutland Telephone have landed substantial orders in Kuwait in hard international competition.

Jutland Telecom International (owned by Jutland Telephone) and NKT [Nordic Cable and Wire] Electronics, a subsidiary of Nordic Cable and Wire Factories, have obtained the first export order for a telephone system based on optical fibers--so-called light-conductor cables. The order came from the Communications Ministry in Kuwait.

It involves two sections from the telephone central in Kuwait City to Hawalli and on to Mushref, a total of 18 km. The order is worth 7 million kroner, of which NKT will deliver 5 million kroner worth of cables and electronics.

Unlike traditional metal cables, light-conductor cables are made from silica. The cables are hair-thin wires. The signals are light flashes produced by a laser source.

Jutland Telecom and NKT landed the order in hard international competition with such firms as Sweden's L. M. Ericsson, which incidentally submitted the cheapest bid. But Kuwait preferred the Danish system which has also been the choice of Jutland Telephone, KTAS [Copenhagen Telephone Company], P&T [Postal & Telegraphic Service] and DSB [Danish State Railways].

"In addition to the set-up itself, the project includes spare parts for 2 years, repair tools, testing and measurement equipment, 2 years of operation and maintenance with Danish personnel and a training course for local workers conducted by the Danish personnel. Deliveries will begin in the second quarter of 1983 and will be completed within 2 months," said NKT assistant director Ole Steen Andersen. "The order has led to a companion project for Kuwait's Institute for Scientific Research, where the Ministry of Communications wants to install a fiber optics training and laboratory

system. It will transmit a TV channel, a two-way telephone channel and a two-way data transmission system."

Nordic Cable and Wire has a traditional primary production of copper cables for telephone companies--with an approximate annual value of 200 million kroner--but over a number of years, part of this production will be phased out and replaced by light-conductor cables, which represent the future. They give static-free transmission of sound and pictures, the cables take up less room, cost less and have a greater capacity than traditional cables.

It was Jutland Telecom that submitted the bid and is responsible for the project. The aim of the company is to sell Danish products that have been developed in cooperation between Danish industries and the Danish telecommunications administration. In Kuwait, Jutland Telecom will be in charge of assembling the cables, training local labor and conducting courses for employees of the Communications Ministry.

Kuwaiti Danish Computer Company will participate in the practical aspects of carrying out the order, among other things it will perform measurements and operating tests, maintain emergency service for 2 years and follow up on local training for 2 years before gradually turning regular responsibility over to the ministry. Kuwaiti Danish Computer was originally founded by Regnecentralen and local investors. Today the company is 100 percent owned by local capital and sells RC [Regnecentralen] products and communications systems.

Enough Electronic Equipment for Exports

NKT Electronics is barely a year old as a firm and it has already become a high-technology enterprise in the NKT concern. The firm makes optical transmitters and receivers. NKT Telecables makes light-conductor cables or fiber cables, as they are also called.

"In the beginning, we were a laboratory based on a business research project conducted in cooperation between NKT's technology center and the Electromagnetic Institute at Danish Technical College," said assistant director Ole Steen Andersen. "In the late summer of 1981, we were made into a separate independent activity. The establishment of the firm was an expression of the main line in NKT's strategic planning. We will manufacture products demanding high technology which provide opportunities for large-scale exports. In that way we can reduce dependence on the Danish market, namely the construction sector."

NKT has deliveries and orders amounting to 70 million kroner on the Danish market, for transmission and receiver equipment as well as cables. On some short stretches, telephone conversations go through light-conductor cables today. DSB will use the system to control the signal service along the coastal rail line when it is electrified.

"It may seem strange that we pay much attention to an order for 5 million kroner from Kuwait. We do so because NKT feels it is important that the Danish system was ranked first in an exacting Arab country. It is important because in many technical contexts, Kuwait functions as a display window for the Arab world," said assistant director Ole Steen Andersen, who stressed that the order would not have come about if Jutland Telephone had not created interest on the domestic market at a very early date in the new technology in cooperation with NKT's efforts in glass fiber technology and electronics and research at the Danish Technical College.

6578

CSO: 5500/2334

ITU EXPERT MAKES RECOMMENDATIONS TO IMPROVE TELECOMMUNICATIONS

Monrovia DAILY OBSERVER in English 10 Aug 82 p 3

[Text]

A seventeen-point recommendation aimed at improving the telecommunications system in the country has been presented to the Ministry of Posts and Telecommunication by an expert of the International Telecommunication Union (ITU).

The expert, Vaman M. Gogte, who is ITU's senior man on Frequency Management, made the recommendation at the end of a four-week review and study of post and telecommunications in Liberia last week.

He came to Liberia as a result of talks held between the ITU and Post and Telecommunications Minister Sarr Abdullah Vandi in Geneva, Switzerland.

In his recommendation, the ITU expert suggested, among

other things, that the Bureau of Maritime Affairs be divorced from the Ministry of Finance and added to the Ministry of Posts and Telecommunications.

He commended the bureau and the Ministry of Posts for cooperating fully with him during his study, and said that ITU will do everything possible with him during his study, and said that ITU will do everything possible to offer them assistance.

Mr. Gogte also recommended that the ministry ask for help from the United Nations Development Program (UNDP) and other donor bodies to instal a \$100,000 monitoring center for the benefit of the entire nation.

To this end, he said that fellowships should be awarded at least three Liberians to

study the management of such equipment in about three months.

There is also need for a UNDP expert to be brought in to work with the Ministry of Posts for about four months during which time he will help upgrade its standard of performance.

In receiving the recommendations, Minister Vandi thanked Mr. Gogte for his work and said his recommendations will be looked into by government at an appropriate time.

He said it was unfortunate that in the past telecommunication, information and communication were virtually left out of national infrastructural schemes, and said now that government is paying attention to them, it would not treat them lightly.

NO MORE POSTS, TELECOMMUNICATIONS CONTRACTS FOR FOREIGNERS

Kaduna NEW NIGERIAN in English 24 Jul 82 pp 1, 17

[Article by Suleiman Dangana]

[Text]

FEDERAL Government contracts for the execution of posts and telecommunications (P and T) projects will no longer be awarded to foreign contractors as from the end of the year, Minister of State for Communications, Dr. U.I. Okon told the New Nigerian in Lagos yesterday.

He explained that the government took this decision because it felt it would not be in the best interest of the nation's security to continue to entrust the country's telecommunications system to foreigners.

He cited as an example the case of Uganda Airport which, he said, was built by the Israelis and which was raided by the same Israelis when they carried out military operation to rescue a hijacked Israeli passenger plane during Idi Amin's regime.

Dr. Okon said that although this country was not yet a major power, "no body can predict what will happen tomorrow."

The New Nigerian had contacted the minister to confirm an information given earlier by the acting general secretary of the National Union of Postal and Telecommunications Employees (NUPTE) Mr. Jaiyejeje Odeajo

to that effect.

Mr. Odeajo gave the hint while briefing newsmen on the outcome of a meeting held between the union representatives and the officials of the Federal Ministry of Communications.

He added that the meeting which was presided over by Dr. Okon himself assured the union of the Federal Government's concern on the misgivings expressed by the union about the foreign contractors.

The union had on Thursday last week threatened to go on strike at the expiration of its 21-day ultimatum if its demands were not met. Among the demands was that P. and T. workers should be involved in the execution of major contracts. Lack of the practice, the union claimed, had made more than 80 per cent of the department's work idle.

The union has contended that a situation whereby foreign contractors were given preference over Nigerians to execute P. and T. projects was posing security risk to the country.

The general secretary therefore stated that because of this positive response from the government, the central working committee (CWC) of the NUPTE had decided to suspend its proposed industrial action.

He said that definite instructions had been given by the minister to the P and T management to grant the union's demands which were within their competence adding that those demands that were beyond the scope of the management were to be taken to the higher authorities for action.

BRIEFS

KANO STATE TELEVISION--THE proposed Kano State television station may go into operation by October this year. A government bulletin issued in Kano quoted the state's Commissioner of Information, Alhaji Wada Abubakar as saying equipment for the station had already been purchased and were awaiting shipping from America. The commissioner assured that the station would be "neutral" adding that he would be a sad person if it was politically biased. The station is expected to broadcast on channels 6 and 7. [Text] [Kaduna NEW NIGERIAN in English 21 Jul 82 p 7]

CSO: 5500/5891

IRISH FIRM AWARDED CONTRACT TO IMPROVE RURAL TELEPHONE SERVICES

Lusaka TIMES OF ZAMBIA in English 17 Aug 82 p 5

[Excerpt]

THE Posts and Telecommunications Corporation [PTC] has awarded a contract worth K3,026,422 to Telectron, an Irish telecommunications company to improve telephone services in rural areas.

PTC director-general Mr Philemon Ng'oma said during the signing of the contract in Ndola yesterday that work on the project would begin early next year and it was hoped telecommunication services would improve when work was completed in five months.

Telectron will supply and instal UHF multichannel radio links between Lasaka, Nampundwe mine, Chelston and the Lusaka International Airport. Mpongwe wheat scheme will be linked to Luanshya.

Maamba and Masuku in the Southern Province will be

linked to Choma, Chadiza to Chipata and Chirundu to Kafue.

The links to be supplied include 900 mhz protected radio, frequency division multiplex and the telectron DEFT 1/8 system.

With DEFT system, eight subscribers are provided with a comprehensive and reliable telecommunications service using only a single voice frequency channel to link the remote subscribers to the parent exchange.

The system was designed by telectron for use in rural regions, isolated settlements and villages.

Telectron general manager for marketing and sales Mr Michael Felton who signed on behalf of his company assured Mr Ng'oma that his company would live up to the good reputation cultivated in other countries.

CSO: 5500/5900

ZIMBABWE

BRIEFS

TV INSTALLATION PROGRAM--The Zimbabwe Broadcasting Corporation, ZBC, is about to begin a major installation program in both the Harare and Bulawayo Television Studios. The whole installation is expected to last about 3 and 1/2 months and should be completed by the end of December 1982. During the period of this installation it is possible that there may be minor disruptions to transmission. However, the ZBC will try to reduce such disruption to an absolute minimum. [Excerpt] [CA260230 Harare Domestic Service in English 1600 GMT 24 Aug 82]

CSO: 5500/5899

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